

DOWN/UPCONVERSION MIXER FOR DIRECT CONVERSION RADIOS

ABSTRACT OF THE DISCLOSURE

A RF down/up-conversion circuit comprising: 1) a local
5 oscillator chopping circuit comprising: a) a frequency divider
circuit for receiving a first local oscillator (LO) signal having
a frequency of LO and generating a frequency-divided second local
oscillator (LO) signal having a frequency of LO/N and
synchronized with the first LO signal; and b) a multiplier for
10 receiving the first and second LO signals and generating a
product signal of the first and second LO signals; and 2) a
differential radio frequency (RF) mixer having a first
differential input port for receiving the product signal from the
multiplier and a second differential input port for receiving a
15 first differential modulated radio frequency (RF) signal and a
second differential modulated radio frequency (RF) signal,
wherein the differential RF mixer generates a differential output
signal.